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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,518	09/30/2003	Takao Tsuzuki	Q77555	1653
23373 7590 03/09/2007 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER JERABEK, KELLY L	
			ART UNIT 2622	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/09/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/673,518

Applicant(s)

TSUZUKI, TAKAO

Examiner

Kelly L. Jerabek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2 and 4-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Claims 3 and 9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 2/5/2007. The Examiner notes that claim 5 has been deemed generic because the claim reads on species I and species II.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 and 4-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirama et al. US 6,028,299.

Re claims 1 and 5, Hirama discloses a linear image sensor (10,20) comprising: at least one photodiode array (12,22); a readout gate (13,23)

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provided parallel to the photodiode array (12,22) on one side of the photodiode array (12,22); a CCD shift register (14,24) provided parallel to the readout gate (13,23); an output circuit (18,28) provided for output from the CCD shift register (14,24) (figure 1; col. 3, line 32-col. 4, line 67); and a shutter structure (15,16,25,26) provided parallel to the photodiode array (12,22) on the other side of the photodiode array (12,22), the shutter structure including: a shutter gate electrode (15,25) that is provided parallel to the photodiode array (12,22) on the other side of the photodiode array (12,22); and a shutter drain (16,26) provided below the shutter gate electrode (25) (col. 5, line 67-col. 6, line 19).

Re claims 2 and 6, Hirama discloses that an upper portion of the shutter drain (16,26) is covered with the shutter gate electrode (25) (figure 1; col. 5, line 59-col. 6, line 19).

Re claim 4, Hirama discloses that the shutter structure (15,16,25,26) is provided between the photodiode arrays (12,22) (figure 1).

Re claim 7, Hirama discloses a linear image sensor (10,20) comprising: photodiode array pair (12,22) provided parallel to each other (figure 1; col. 3, line 32-col. 4, line 67); a shutter gate electrode (15,25) that is provided parallel to the photodiode array pair (12,22) so as to be common to the photodiode array pair (12,22); and a shutter drain (16,26) provided below the shutter gate electrode (25) (col. 5, line 67-col. 6, line 19).

Re claim 8, Hirama discloses that an upper portion of the shutter drain (16,26) is covered with the shutter gate electrode (25) (figure 1; col. 5, line 59-col. 6, line 19).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hirama (US 6,002,497) discloses a three-line linear sensor. The information regarding the shutter structure of a linear image sensor is relevant material.

Kuno (US 6,473,125) discloses a solid-state imaging device with shutter operation in sync with signal charge reset and a method of driving the same. The information regarding the shutter structure of a linear image sensor is relevant material.

Kimura (US 6,791,614) discloses a color linear image sensor device with shutter function for charges in photo-detectors. The information regarding the shutter structure of a linear image sensor is relevant material.

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Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly L. Jerabek whose telephone number is (571) 272-7312. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571) 272-7304. The fax phone number for submitting all Official communications is (703) 872-9306. The fax phone number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at (571) 273-7312.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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